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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,279	10/30/2006	Prasanta Halder	016906-0437	4027
22428 7590 03/30/2010 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
FORD, JOHN K				
ART UNIT		PAPER NUMBER		
3744				
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03/30/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,279

Applicant(s)

HALDER ET AL.

Examiner

John K. Ford

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/4/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date 10/4/05 and 10/19/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Applicant has submitted two un-translated search or examination reports: one from the EPO (stamped Eingang 30 Okt. 2009) and one from the JPO (stamped Eingang 30 Sep. 2009). In response to this office action applicant please provide a translation of the aforementioned documents or, if applicants maintain such translations are unavailable, a paraphrase by counsel, in English, of the substance of these two documents so that the examiner can understand what his fellow examiners are doing with corresponding claims in their respective patent offices.

The drawings are objected to under 37 CFR 1.83(a) because drawing Figure 2 fail to show the relevant details of the flow paths for portions 5a and 5b through the heat exchanger as described in the specification. See the 35 USC 112, first paragraph, rejection below. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The disclosure of the heat exchanger depicted in Figure 2 is so poor that one of ordinary skill in the art would not know what to construct. It appears that separate liquid streams enter inlets 22 and 42 in Figure 2. Is that correct? It appears that those same liquid streams exit at outlets 24 and 44, respectively. Is that correct? Each of those streams appears to make a "U-turn" (within the tubes) in the vicinity of "70" in Figure 3. Is that correct? If all of the above is correct, then that much is understood. What is not

understood is where collecting means 47 (see specification page 11, lines 4-8) is located or how it works. It is also not understood how region 5b operates. A single inlet 61 is shown for the "refrigerant" and there doesn't appear to be any outlet for the "refrigerant." This is not understood. Conventional heat exchangers have at least one inlet and at least one outlet. Is inlet 61 really connected to a source of "refrigerant" as opposed to engine coolant (like inlets 22 and 42 above)? Where does the "refrigerant" exit and where does it go after that? It states in the specification that partition 23 subdivides distributing and/or collecting means 27 only (page 11, lines 10-18, emphasis supplied), but not collecting and/or distributing means 25? How is this possible? Again a distributing or collecting means 47 is mentioned on page 11, line 28 of the specification that is not shown in any drawing. On page 11, line 36, beginning with the word: "Consequently...." applicant describes a flow path from inlet 61 to outlet 24 that the examiner does not understand. Perhaps the quality of drawing Figure 2 is so poor that the examiner cannot see the relevant detail.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "especially" in all of the claims is vague. The term "especially" in all of the claims is a relative term which renders these claims indefinite. The term "especially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In claim 1, the limitation "being configured differently" is vague. Does this mean configured differently from one another? Does this mean differently from some unspecified structure (e.g. in the prior art for example)? In either case, it is unclear in what way the configuration must be different to satisfy or not satisfy the claim. Is a "throughflow means" that is located in a different place in the duct a throughflow means that is "configured differently"? Claim 1 is very vague as to what "configured differently" means.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10-13, 15-16, 20-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Beck (USP 6,206,092).

Beck discloses in Figures 2-4, the claimed subject matter. The heating means 35 as shown in Figure 3 has four throughflow means that are respectively connected to outlet means 31, 32, 33 and 34. Each of these throughflow means is configured differently. For example, they are all configured differently because they are each located in a different region of the air duct. The two sections at the bottom of Figure 3 are smaller than the sections above them and hence are "configured differently." A supply of gaseous medium is shown at arrows 41. Heating means is shown at 35. At least two spaces are shown downstream of the heater (one above partition 42 and one below partition 42). Multiple ducts with regulators 44, 45, 46, 50 and 51 are shown. An evaporator 40 is shown. A fan is shown in Figure 1 of Beck which would have been obvious to have used in Figure 2 of Beck (in the vicinity of arrows 41) to advantageously propel the air through the heat exchanger when the vehicle was not moving. Regarding claim 6, Beck in Figure 4 has a central tank 19 that has four supplies to each of segments 8, 8', 9 and 9' and four discharges as well (which meet the limitation as claimed). Regarding claim 7, see valves 60-64.

Claims 1-5, 7-9, 11, 13, 17-20, 25 and 26 are rejected under 35 U.S.C. 103(a) as obvious over JP 10-119545 (Figure 1) in view of Beck (USP 6,206,092).

To have configured Figure 1 of JP '545 with regulating means in ducts 31a, 31b, 31c and 31d as taught by Beck at 44, 45, 46, 50 and 51 would have been obvious to one of ordinary skill to allow the occupant improved control over the air flow distribution in the passenger compartment. The heating means in JP '545 has at least two throughflow means that are configured differently. One throughflow means comes down from the top and the other comes up from the bottom. The fan is shown at 1 and the evaporator at 8.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-119545 (Figure 1) in view of Beck (USP 6,206,092) as applied to claim 1 above, and further in view of JP 11-6693.

To have constructed the flat tubing and the partition separating chambers 22 and 23 in JP '545 in the manner taught by JP '693 in Figure 9 would have been obvious to one of ordinary skill in the art. The addition of such a partition 19, with channels 50 and 51 as shown in Figure 9 of JP '693 would improve coolant flow when used in JP '545 in both the upper and lower partitioned headers that define chambers 22 and 23 in JP '545.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Beck (USP 6,206,092) alone or JP 10-119545 (Figure 1) in view of Beck (USP 6,206,092) as applied to claim 1 above, and further in view of JP 55-51615 (Figure 6).

JP 55-51615 (Figure 6) discloses a heater core with three inlets and three outlets. To have used such a heater core in the prior art to Beck alone or JP 10-119545 in view of Beck, as described above, to improve the distribution of heat in a three zone system would have been obvious to one of ordinary skill in the art. The examiner recognizes that Beck shows a four zone system and JP '545 shows a two zone system. It is well known that vehicles use three zone systems as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John K. Ford/
Primary Examiner, Art Unit 3744